

## REMARKS

Reconsideration of this application is respectfully requested in view of the foregoing amendments and discussion presented herein.

1. Allowability of Claims 67-96.

The Applicant notes with appreciation the Examiner's determination that Claims 67-96 are allowable.

2. Allowability of Claims 5, 20, 25-26, 32, 36-38, 40, 47 and 60-61.

The Applicant also notes with appreciation the Examiner's determination that Claims 5, 20, 25-26, 32, 36-38, 40, 47 and 60-61 would be allowable if rewritten to overcome the rejections under 35 U.S.C. §112, and to include the intervening claims.

In response, the Applicant has amended the claims noted with regard to the 112 rejection which should now be in a condition for allowance, and has added claims 97 (based on claim 5) and Claim 102 (based on claim 60) which each include intervening claims.

3. Rejection of Claim 1-5, 12-13, 47 and 60-61 under 35 U.S.C. §112.

The above claims were rejected as being indefinite.

Claim 1. The term "said alert signal" was considered to have two different antecedents within the claim. The Applicant has amended the claim to recite a first alert signal and a second alert signal, these terms being carried through the respective dependent claims.

4. Rejection of Claims 1 and 3 under 35 U.S.C. §103(a).

Claims 1 and 3 were considered unpatentable over Gao (US Pat. No. 5,717,377) in view of Rahman (US Pat. No. 6,121,896).

Applicant has carefully considered the grounds for rejection and responds as follows.

Claim 1. This is the independent claim within this group of claims. The teachings recited in Applicant's Claim 1, have been misinterpreted, thereby leading to the confusion with regard to the relationship to the teachings of Rahman '896.

### **Elements In References Are Not Equivalent**

Individual elements of Claim 1 are materially different from those shown in the cited references. The combination does not fulfill the requirements outlined under 35 USC 103, as it does not teach every claim element.

Specifically, the "position related data" communicated wirelessly as recited in Applicant's Claim 1, is vehicle position related data (see page 62, line 20 through page 63, line 16), and not intensity (brake pedal travel data) as registered by Gao '377 for altering the intensity of light output. The claim has been amended to clearly recite "vehicle position related data".

Claim 3. This claim depends from independent Claim 1, whose patentability has been demonstrated, therefore dependent Claim 3 should be considered *a fortiori* allowable.

Therefore, Claim 1 and the claims which depend therefrom have been shown to be patentably distinct from the recited references, and the rejection should be withdrawn.

5. Rejection of Claims 2, 6-8, 10, 14-19, 21, 28-30, 33-35, 39, 44-46 and 48-49 under 35 U.S.C. §103(a).

Claims 2, 6-8, 10, 14-19, 21, 28-30, 33-35, 39, 44-46 and 48-49 were considered unpatentable over Gao (US Pat. No. 5,717,377) in view of Rahman (US Pat. No. 6,121,896)

and Gearey (US Pat. No. 4,916,431).

Claim 6. This is the independent claim within this group of claims. The teachings recited in Applicant's Claim 6 do not comport with the combined teachings of Gao, Rahman and Gearey as given in support of the rejection.

**Claim limitations not taught by combination**

ALL CLAIM LIMITATIONS MUST BE TAUGHT OR SUGGESTED by the combination of prior art references, or teachings. See MPEP 2143. An element of Claim 6 describes the inclusion of "signal regeneration data" which is communicated to secondary vehicles. The use of signal regeneration data as taught by the Applicant, (i.e. see page 17, lines 15-19; page 24, lines 3-6; page 25, lines 4-6, and so forth) is not taught within the relied-upon references. Applicant alone has discovered this problem with communicating braking between vehicles, a problem which has been addressed and for which elements are recited in Claim 6. Since the combination does not add up to the invention recited in Applicant's Claim 6, a *prima facie* case of obviousness does not exist.

Claims 2, 7-8, 10, 14-19, 21, 28-30, 33-35, 39, 44-46 and 48-49. These are dependent claims within the group of claims which depend from independent claims 1 and 6. Since, the base claims have been shown to be allowable, the dependent claims should be considered *a fortiori* allowable and the rejections withdrawn.

However, elements recited within a number of these dependent claims are patentable in their own right, and have not been considered properly in view of the cited references, the following provided by way of example.

Claim 10. This dependent claim recites the use of an acceleration sensor on the brake pedal for characterizing the urgency of brake application. None of the references

sense the acceleration at the brake pedal, which provides more rapid sensing of rapid deceleration and more robust sensing than other techniques.

Claim 15. This dependent claim recites “*a communications protocol in which a multiplicity of senders and signal regenerators are synchronized to the event being generated from a primary signal generator located the farthest forward within a group of vehicles*”. These aspects are not found in the cited references, nor is there a suggestion, motivation or incentive to be found in the references for inclusion of this aspect of the invention. The only teaching with regard to synchronization of brake signal generation is found within Applicant's invention.

Claim 16, 18-19. Claim 16 within this group of dependent claims recites “wherein said communications protocol comprises a multiplicity of time slots selected for event signal transmission by said controllers within anti-collision system of additional vehicles proximal to said first vehicle”. In support of the rejection it is indicated that “*Rahman teaches the desirability of ensuring that signal transmissions are not erroneously received*”. However, a number of problems exist with this rejection.

First, Rahman '896 teaches: “*The warning signal transmitted by each transmitter T is in the form of a narrow highly-focused beam of radiant energy which is received only by a vehicle in the same traffic lane as the vehicle doing the transmitting*”. The teaching of Rahman '896 (or the other references) in no way comports to the use of the time slotting which allows communication between a plurality of vehicles, which need not be in the same traffic lane. In fact as Rahman only teaches a single optical path from leading to following vehicle it does not need the ability to discriminate from multiple sources. Therefore this claim limitation is not supported by the proposed combination.

Claims 18-19 provide additional limitations with regard to claim 16, specifically in claim 18 the use of periodic retransmissions of an event are described within a selected timeslot, and the use of a temporally offset between transmissions. The recited references do not have any similar aspect whatsoever, and the only motivation for creating these aspects of Applicant's invention are found within Applicant's invention.

Claim 21. This dependent claim recites the encoding of *"multiple levels of severity data within the event signal"*. This aspect has been erroneously considered equivalent to the light intensity being controlled by the resistor-sensor 18 in FIG. 1 of Gao as described in the first part of Gao claim 1. First, the levels of severity data are encoded within the event signal which is communicated over a communication link to the event. Gao, only varies the intensity of light, no severity data per se is communicated. Second Gao, does has no means by which multiple levels of severity data are communicated, as described by the claim. By way of example an embodiment of the multiple events are described in Applicants specification at page 25, line 22 through page 26, line 1 as: *"Crash, Slamming brakes, Hard braking, Emergency vehicle approaching, Emergency blinkers"*. Gao provides no such similar teachings whatsoever with regard to levels of severity data, and does not even communicate data. However, Applicant has amended Claim 21, to further clarify that the multiple levels are discrete levels of alert as well described by the examples in Applicant's specification.

Although these dependent claims should be considered a fortiori allowable in view of the dependent claims on which they are based, they have patentability on their own merits as has been exemplified above.

Therefore, Claim 6 has been shown to be patentably distinct over the combination of

references and the rejection of Claim 6 and all claims which depend therefrom should be withdrawn.

6. Rejection of Claim 42 under 35 U.S.C. §103(a).

This dependent claim was rejected as being unpatentable over Gao in view of Rahman, Gearey and Donnelly et al. (US Pat. No. 6,076,028).

Claim 42. This claim is a dependent claim that recites using the communication capabilities of the anti-collision system recited in claim 6 for communicating event signals (i.e. Crash, Slamming brakes, Hard braking, Emergency vehicle approaching, Emergency blinkers as defined in one embodiment within specification) through a call-box to remote public safety personnel.

As this claim depends from Claim 6, whose patentability has been demonstrated, it should be considered *a fortiori* allowable.

7. Rejection of Claim 31 and 41 under 35 U.S.C. §103(a).

These dependent claims were rejected as being unpatentable over Gao in view of Rahman, Gearey and Yanagi (US Pat. No. 6,278,360).

Claim 31, 41. These are dependent claims within the application that depend from Claim 6, which has been shown to be allowable.

Therefore, the rejection of these claims should also be withdrawn.

8. Rejection of Claim 4 under 35 U.S.C. §103(a).

This dependent claim was rejected as being unpatentable over Gao in view of Rahman and Sendowski (US Pat. No. 6,225,896).

Claim 4. This dependent claim within the application depends from Claim 1, which has been shown to be allowable.

Therefore, the rejection of this claim should also be withdrawn.

9. Rejection of Claim 9 under 35 U.S.C. §103(a).

This dependent claim was rejected as being unpatentable over Gao in view of Rahman, Gearey and Matsumoto (US Pat. No. 6,150,933).

Claim 9. This dependent claim within the application depends from Claim 6, which has been shown to be allowable.

Therefore, the rejection of this claim should also be withdrawn.

10. Rejection of Claim 22 under 35 U.S.C. §103(a).

This dependent claim was rejected as being unpatentable over Gao in view of Rahman, Gearey and Matsumoto (US Pat. No. 6,150,933).

Claim 22. This is a dependent claim depending from Claim 6 whose patentability has been demonstrated, therefore it should also be considered allowable. However, Applicant would also like to point out that this claim recites *"said controller is configured to encode identification data allowing event signals generated from different vehicles to be distinguished from one another"*. This limitation is not recited by the teachings of Gao in view of Rahman, Gearey and Beymer. None of these references recite a encoding identification data for discerning different vehicles from one another. The cited passage of Beymer (col. 8, line 65 through col. 9, line 44) only indicate if a vehicle is part of a "chain", which does not constitute *"allowing event signals generated from different vehicles to be distinguished from one another"*, as recited in Claim 22.

Therefore, in view of dependency on claim 6 and further since the cited reference do not disclose this aspect of the invention, the rejection of this claim should be withdrawn.

12. Amendment of Claims 1, 4-6, 12-13, 21, 60, 87 and 96.

Claim 1. Amended to discern between the alert signal generated by the sensing means (first alert signal), and the rearward communication means which receives the first alert signal and generates a second alert signal, in the radio-frequency spectrum.

The phrase "position related data" has been clarified as "vehicle position related data" to clarify what form of position is being sensed. Support for the amendment is found in the specification which describes use of travel direction and/or location, for example as found on page 62, line 20 through page 63, line 16.

Claim 4, 5. These claims were amended to recite "first alert signal" and "second alert signal" to provide proper antecedent from Claim 1.

Claim 6. This independent claim was amended to change the term "operably connected" to "operably coupled", which is more in keeping with current use, and to recite the location of the event indicators which are being remotely communicated with.

Claims 12-13. The preamble of these claims was amended to properly recite the dependency with Claim 6, in response to the prior deletion of Claim 11.

Claim 21. This dependent claim was amended to recite that the multiple levels of severity data are "discrete", which is described in the specification and implied in the multiple levels, as opposed to a range. In addition, the phrase "for communication to said secondary vehicles" was added to clarify the claim and correspond to the change in the base claim.

Claim 60. This claims depends from Claim 1, and was amended to clarify "second alert signal" in keeping with the amendment to Claim 1.



Claim 87. This the construction of this dependent claim was amended into a more suitable Markush group form. As the claim to which it depends is already allowable this should not change the allowability of this claim.

Claim 96. This independent claim was amended as a matter of form; wherein "operable connected" was replaced with "operably coupled", while the controller is said to be "configured to..." instead of "adapted to".

13. Addition of Claims 97 - 106.

Claim 97. This claim is a combination of amended Claim 1 and Claim 5. Claim 5 being considered allowable with the inclusion of the limitations from preceding claims.

Claim 98. Depends from Claim 97 and includes the limitations from the combination of original claims 2-3.

Claim 99, 100. Depends from Claim 97 and includes the limitations from original claim 25.

Claim 101. Depends from Claim 97 and includes the limitations from Claim 40.

Claim 102. An independent claim based on Claim 60 including the limitations of Claim 1.

14. Additional Claim fees.

Within the present application eighty-two (82) total claims have been paid for including six (6) independent claims. Two (2) independent claims have been added and two (2) independent claims cancelled. A total of six (6) total claims were added to correspond to the six which have been cancelled, wherein a total of eighty-two (82) total claims remains.

Therefore, no additional claim fees are required, or submitted.

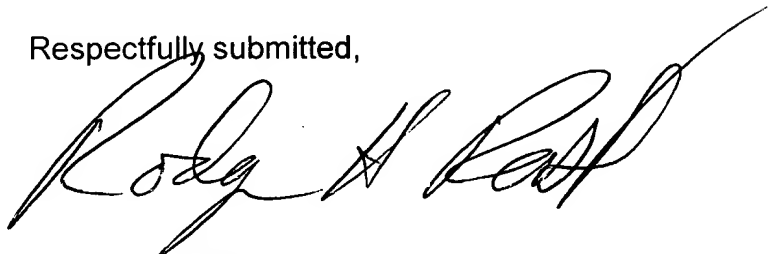
15. Conclusion.

The amendment modifies, and/or adds, a number of claims within the present application. Any changes to the specification are considered by the applicant to provide clarification while not adding new matter to the application. Each of these presently pending claims in this application are believed to be in immediate condition for allowance.

The Applicant respectfully requests a response/interview (email/phone) with the Examiner to clarify any issues that arise upon examination on the merits of the present application, if an allowance of all claims does not appear forthcoming.

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Respectfully submitted,

A handwritten signature in black ink, appearing to read "Rodger H. Rast", written in a cursive style.

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